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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/644,869 | 08/21/2003 | Kenji Katoh | 116911 | 6860 |
| 25944 | 7590 | 10/05/2004 | EXAMINER | |
| OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320 | | | TRAN, DIEM T | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3748 | |

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------------|-------------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/644,869 | KATOH ET AL. |
| | Examiner Diem Tran | Art Unit 3748 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 1-3, 10 and 11 is/are allowed.
- 6) Claim(s) 4-9 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 3748

DETAILED ACTION

This office action is in response to the Request for Reconsideration filed on 7/20/04.

Overall, claims 1-11 are pending in this application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 4-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Mizuno et al.

(US patent 6,684,627).

Regarding claim 4, Mizuno discloses a method of purifying exhaust gas of an internal combustion engine comprising steps of:

disposing a NOx occluding and reducing catalyst (39) (see Figure 1) in an exhaust gas passage of the internal combustion engine (see col. 8, lines 3-15); purifying the NOx occluded by said catalyst by reduction with reducing components in the exhaust gas from said engine when the engine is operated at the stoichiometric air-fuel ratio or at the rich air-fuel ratio, wherein a sulfur-solidifying agent that forms a solid sulfate upon the reaction with SOx at the time of combustion is supplied to the engine to solidify the SOx in the exhaust gas thereby to prevent the SOx in the exhaust gas from being occluded by the NOx occluding and reducing catalyst, and the amount of supplying said sulfur-solidifying agent to the engine is controlled

depending upon the condition of the atmosphere at said catalyst or the operating condition of the engine (see col. 2, lines 37-48, col. 8, lines 40-57).

Regarding claims 5, 6, Mizuno further discloses that said sulfur-solidifying agent is not supplied to the engine when the condition of the atmosphere at said NOx occluding and reducing catalyst is one for suppressing the occlusion of SOx by the NOx occluding and reducing catalyst (see col. 8, lines 50-57).

Regarding claims 7-9, Mizuno further discloses that said sulfur-solidifying agent is supplied to the engine in a decreased amount when said internal combustion engine is operated under a condition of promoting the formation of deposit in the engine due to said sulfur-solidifying agent (see col. 6, lines 35-36, col. 10, lines 65-67, col. 11, lines 1+).

Allowable Subject Matter

Claims 1-3, 10-11 are allowed.

Response to Arguments

Applicant's arguments filed on 7/20/04 have been fully considered, and they are deemed persuasive in part. Pursuant to the telephone interview with Applicant on 5/13/04, the objection of the specification has been withdrawn. Applicant argued that the Mizuno reference fails to disclose controlling the supply of the sulfur solidifying agent to the engine depending upon the operating condition of the engine. The Examiner respectfully disagrees, since the Mizuno reference discloses the amount of supplying the sulfur-solidifying agent to the engine is controlled depending upon the operating condition of the engine (see col. 2, lines 40-48).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

Any inquiry concerning this communication from the examiner should be directed to Examiner Diem Tran whose telephone number is (703) 308-6073. The examiner can normally be reached on Monday -Friday from 8:00 a.m.- 5:30p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (703) 308-2623. The fax number for this group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

Diem Tran

Diem Tran
Patent Examiner
Art unit 3748

DT
September 24, 2004

Thomas Denion
THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700